AGENDA
Nonpoint Source Tracking and Monitoring Council
October 25, 2005, 10 am – 3 pm
Cal EPA Building,
Training Room 2 East and West
1001 I St., Sacramento

Item Time	Item Description	Lead
10:00 – 10:15	**Introductions** • Review Meeting Minutes (7/20/05) • Review Agenda/Meeting Purpose • Introductions	Sam Zielger, EPA Meeting Facilitator
10:15 – 10:30	**NPS Management Measure Tracking** • Introduction • Strategy - Indicators	Steve Fagundes, SWRCB
10:30 – 11:00	**Marinas Management Measure Tracking** • Indicator Development • Data Review	Lisa Sniderman, CCC
11:00 – 11:30	**Wetlands Management Measure Tracking** • Indicator Development • Data Review	Ross Clark, CCC
11:30 -12:00	**Urban Management Measure Tracking** • Indicator Development	Lisa Sniderman, Greg Gearheart, SWRCB
12:00 – 1:00	**Lunch**	
1:00 – 1:45	**Enhancing Regional Monitoring - Brainstorming** • Request for Ideas	Sam Ziegler, EPA Melenee Emanuel, SWRCB
1:45 – 2:10	**NPS Conference Workshops (11/8/05) - Description** • Project Performance Measures • Monitoring Design	Rainer Hoenicke, SFEI
2:10 - 2:30	**Round Robin Update (Bring your items)** • Watershed Indicators • SB 1070 • SWAMP-SPARC review • NWQMC • Others	 Barbara Washburn, OEHHA Angela Haren, California CoastKeeper Alliance Val Connor, SWRCB Val Connor Others
2:30 – 3:00	**Wrap up**	Sam Ziegler

California Nonpoint Source Tracking and Monitoring Council
February 2005

CHARTER

Mission

To help improve implementation tracking and water quality monitoring to enhance local, state, federal, tribal and private efforts to address nonpoint source pollution and protect designated uses.

Description

The Council will focus on addressing the implementation tracking and water quality monitoring needs associated with the California Nonpoint Source Pollution Control Program. The Council's efforts will be designed to enhance information needed for implementation at many levels (e.g., from local watershed organizations to state and federal agencies and the private sector) and among various programs. The activities of the Council will be coordinated with the Water Boards' Surface Water Assessment and Ambient Monitoring Program (SWAMP) and other related efforts. The SWRCB and CCC are forming the Council, in cooperation with U.S. EPA, as a subcommittee of the State's NPS Interagency Coordinating Committee, and will provide staff support.

Scope

The Council will address the biological, chemical, physical and ecosystem aspects of tracking and monitoring, including surface and ground waters, freshwaters, estuarine, and mairine environments in California. Therefore, the Council will encourage comprehensive, watershed-based, and cross-programmatic monitoring.

Members

Representatives from local, state, tribal and federal agencies, watershed groups, universities, and the private sector are welcome to participate on the Council. Meetings will be open, informal and consensus driven with votes taken, only as needed, with one vote per organization. It is anticipated that the Council will eventually identify co-chairs and an executive committee.

Need for Council

Monitoring indicates that nonpoint pollution is the leading cause of water quality impairments. However, numerous entities have identified the need and importance for continued work toward coordinating and improving water quality monitoring. Congress, the State Legislature and others are increasingly emphasizing the need to tie assessments of our NPS programs and corresponding public expenditures to improvements in water quality. Since 1990, CWA Section 319 has provided over $90 million to the CA NPS Program and state bonds are now investing $100's of millions more. Several NPS related programs (TMDLs, Conditional Waivers for

Irrigated Agriculture, water bonds, CWA Section 319, etc.) have tracking and monitoring requirements and it is important to coordinate with these efforts. Improved monitoring is essential to identify NPS sources, provide a further understanding of their impacts, guide control efforts and ultimately prove the value of the controls.

Goals

- Enhance coordination, communication and collaboration among various tracking and monitoring programs for data collection, data management, data sharing and assessment.
- Provide consistent and scientifically defensible water quality monitoring data.
- Maintain an effective, performance-based approach to making decisions regarding investment of resources to reduce or prevent NPS pollution in California.
- Document the extent and effectiveness of NPS implementation, and ultimately the value of implementation for the preservation of designated uses and water quality.
- Foster goal-oriented monitoring that supports watershed management.
- Strengthen project monitoring (e.g., bond & 319 funded "on-the ground" projects).
- Help establish and carry-out a state monitoring strategy.
- Establish mechanisms to correlate land use activities and water quality.
- Support and encourage the utilization of new monitoring and assessment methods and techniques, as appropriate (e.g., probabilistic sampling, bioassessment, etc.).

Anticipated Activities

- Inventory of existing monitoring, tracking, and assessment programs.
- Review and comment on California's NPS tracking and monitoring strategies, and SWAMPs long term water quality monitoring strategy.
- Establish and test methodologies to track NPS implementation.
- Help prepare a CA NPS Program annual report based on tracking and monitoring data – and is so doing, identify data gaps, and monitoring and assessment needs.
- Provide technical guidance to the California Monitoring and Assessment Program (CMAP).
- Sponsor water monitoring technical workshops.
- Integrate local and volunteer monitoring with state/regional programs.
- Enhance data management, exchange and compatibility.
- Coordinate use of environmental indicators.
- Leverage resources (e.g., joint projects).
- Advocate NPS monitoring needs at various levels.

Annual Council Performance Review

On an annual basis the Council will review its performance to confirm the need to continue, and determine future activities and direction. This review will include consideration of whether the Council would benefit by expanding its mission beyond nonpoint source pollution.

July 20, 2005
Tracking and Monitoring Council Meeting Minutes
CalEPA Building, Sacramento

Introduction: Sam Ziegler, USEPA-Region 9, California Nonpoint Source Program Manager.

The Nonpoint Source Tracking and Monitoring Council (TMC) is patterned after the National Water Quality Monitoring Council (http://water.usgs.gov/wicp/acwi/monitoring/). The TMC has developed a charter and objectives (attachment) that focus on NPS issues, while supporting comprehensive monitoring. A main objective of the Council is to enhance coordination and cooperation between a wide range of organizations in order to improve monitoring and assessment.

Statewide Strategy for Water Quality Monitoring: Presentation by Val Connor, SWRCB Monitoring and Implementation Unit Chief.

The Surface Water Ambient Monitoring Program (SWAMP) is in the process of developing a statewide strategy for water quality monitoring. SWAMP was created to fulfill the mandate of the Senate Bill (SB) 982. SB982 required the State Water Resource Control Board (SWRCB) to develop a comprehensive state program for surface waters of all water bodies, to assess impacts of beneficial uses and address all the Clean Water Act and Water Code responsibilities.

The development of a national and state monitoring requires that State create a framework for collaboration and comparability among programs. The core principle for the SWAMP strategy is data comparability and data accessibility through the development of tools (eg., standardized field methods, lab analysis performance criteria, QAPP, database and training templates). The tools are provided through SWAMP and used by other monitoring programs. Incorporating data from other resource is important to develop and analyze data relationships. The NPS-TMC's goal is to integrate the various levels of data to analyze water quality. When considering water quality, it is important to think of it in broader terms, such as watershed health. The most important component to addressing watershed health is developing indictors to assess. SWAMP focuses primarily at what is the water quality, but uses different indicators for assessment such as measurements of channelization and plant growth on stream or watershed health. In that regards to developing indicators, SWAMP has created a bioassessment group that developed difference levels of biological analyses. In linking water quality to watershed assessment, California is trying to come up with a list of watershed indicators that can be presented to the public. One of the difficult issues is transcending scales, because there are different drivers for different groups. It is important to continue the dialog between the NPS TMC Council and the California Ocean Protection Conservancy (OPC). Monitoring is defined differently among groups, therefore it may be important to invite a representative from the OPC clarify what is meant by "monitoring."

Comment and suggestion from the group:

- SWAMP needs to look at some larger scale that puts the water quality parameter in perspective to the health of a watershed (e.g., hydrology of watershed and presence of endangered species. The two ways to approach this idea is: (1) have indicators for these in SWAMP, or (2) have other groups develop the indicators.
- Watershed indicators should be included in CEDEN, not SWAMP. However, this would be difficult to implement because SWAMP is water quality driven by the SWRCB/RWQCB's priorities. SWAMP does address a lot of water quality assessment indicators such as habitat restoration and etc., so it is more inclusive.

- The State need to address problems on a regional scale, therefore the NPS TMC should be involved to develop common question or indicators. We need to determine who will pull this information together and identify the scale of the effort. Participants should put together a list of needs that we would like to see SWAMP accomplish.

California Environmental Data Exchange Network, presentation by Karl Jacob, DWR

The California Environmental Data Exchange Network (CEDEN) provides a data management system called the Bay/Delta and Tributaries Database Project (BDAT). This database requires coordination/cooperation between agencies and stakeholders, in order import and export data. The system provides access to a multitude of monitoring program data from many individuals. Some of the other tools that the system provides are data for predictive tools such as models, data for project operations, data for adaptive management a system to distribute GIS and model output and data on mitigation devices (fish screen/barriers etc.). The system also includes a local database component that provides local management and control of the data. The system provides a data-entry utility so data can be entered into the PC and comprehensive database, a PC database for the group who collects the data and infrastructure for transferring data from the data provider to the comprehensive database.

Comment and Suggestion of the group

- The local system is set up to allow them to generate reports and analyses for presentations. The Department of Water Resources provides training for using the system (e.g., training is part of the RWQCB-5 Ag waiver program. There is training for using the tools available in the CEDEN to local groups on how to use the interface. AB 1747 requires training for data input, the reality is that SWRCB/RWQCBs focus on QA/QC and over 600 projects will need to be inputted – that is a potential issue. Of the 600 projects, the projects should be prioritized and methods need to be established on how to get the information.
- Department of Financial Assistance (DFA) requires information to be put into a format that can be used for input into what database will be eventually used.
- State Water Project (SWP) and California Bay Delta Authority (CBDA) have funded this effort.
- All grant recipients need to catalog information into the CERES database (not actual data).
- The scale of involvement in the data management system is mostly State agencies, but watershed groups will increasingly use it in the future. All project are included in the system, not just bond funded projects
- This system lends itself to data local libraries.
- Thought should be given to what the data input is for and also the data should be noted is for 'ambient water quality data."
- Approval for a Feasibility Study Report (FSR) for California Integrated Water Quality System) (CIWQS) that leverages and integrates all the SWRCB and RWQCBs' data needs.
- There should be a link on CEDEN as to what monitoring is being done and where and how it fits in our proposal for the San Joaquin Network.

Updates

SB 1070 – presented by Dave Paradies, Morro Bay Foundation

- SB 1070 is proposed legislation to establish a State Monitoring Council. The effort was initiated through the AB 982 (Public Advisory Group) with respect to data integrity and compatibility. The California Resources Agency and California, Environmental Protection Agency would require to a development of MOU. SB 1070 is designated as a two-year bill and that is currently part way through state legislation.

Monitoring and Project Performance Workshop, Mike Connor – SFEI

- A program performance (PAEP) and a monitoring design workshop will be held at the NPS Conference on

CURES, Perry Clausen

- There is a quarterly newsletter posted on the CURES website. The newsletter is supported by the Almond Board.

UC/SF Bay Estuary, Anitra Pawley

- There is a Coastal watershed assessment on Golden Gate Park.

Agricultural Water Quality Monitoring, Management Measure Tracking and Data Management in the Central Coast Region – Karen Worcester, CCRWQCB

The Central Coast Region is managing data being delivered through the new agricultural waiver program. The data management system has two main components. The first component is for handling management practice data required as part of the Notice of Intent and annual reports for the program. Growers submit information on the location of their ranch (Township-Section-Range), Operator Identification Number (as per DPR Pesticide Use requirement), contact information, crop type, irrigation type, and discharge type. They also indicate whether practices are in place, planned in the next three years or not applicable, and how many acres of land are addressed by management practices. This latter information is reported at a broad category level of erosion control, irrigation management, pesticide management and nutrient management. Demonstrations of the management practice tracking tools and the maps that have been generated from the data can be viewed at http://www.ccamp.org/ca3/California.htm.

Dave Paradies has developed a unique water quality data delivery tool that checks files for correct formatting and automatically feeds information back to the submitter. The tool assists in checking for SWAMP compatibility by comparing data to required SWAMP language and target reporting limits. This will allow consultants and other users to very quickly get feedback on formatting, missing data, required information, etc. without waiting for staff turnaround time. The system is currently being tested in an interactive mode with the contractors for the Cooperative Monitoring Program for agriculture. Central Coast staff anticipate, however, that it will be adapted more broadly for use by their timber waiver program participants, for grant recipients who are collecting data, and volunteer monitors who wish to submit data for use by agency staff. The system has been structured to allow data to be readily imported into Region 3's format for web site development, as well as into the Surface Water Ambient Monitoring Program's database and the EDF format being used for CIWQS. Data delivery formats and validation files can be viewed at http://www.ccamp.org/ca3/California.htm. The Central Coast Region's data can be viewed at http://www.ccamp.org/ca0/3/3.htm.

Comments and suggestions from the group:

- The database was built for free from Dave Paradies and it is populated through existing EXCEL or ASCI files.
- It is possible to used this for the RWQCB-5 agriculture waiver program.
- The CCRWQCB will start using tend data analysis for Pajaro River in their rotation of watershed efforts and Morro Bay watershed has also shown tend analysis.
- The database has to capability to of importing data from such sources as STORET.
- The CCRWQCB motivates farmers through a lot of upfront work with stakeholders to generate reasonable approval.

Indicator Development: Bio-Assessment presentation by Terry Fleming, U.S. EPA

California Monitoring Assessment Program (CMAP) is designed to address the water quality in perennial wadeable streams in California. The main goal of CMAP is to develop indicators for the State. The indicator used in CMAP is biological integrity through bioassessment. The main nonpoint source question that it is designed to address is; water is the quality of the water in California, is water quality getting better or worse, and to what extent of impairment is associated with nonpoint source. Through the evaluation of historical EMAP data, the following products have be developed to address the NPS question; (1) Southern Coast report using the SC-IBI (available in draft), and (2) Northern California using the NC-IBI (draft). In progress is the statewide report using RIVPACs predictive model and the breakdown of sites by NPS categories. The collection and evaluation of CMAP data started in 2004 and will end in 2009. The process will continue as follows; trends in statewide conditions will be conducted annually, associations with stressors and land use is on-going, and the status of condition by land use will be completed in 2010.

Comments and Suggestions from the group:

- It is difficult to link probabilistic design to other monitoring programs and samples are taken in areas that are stratified by sited availability, which produces bias in the assessment. This also limits the ability to address land use categories. Is the probabilistic method the best way to do this assessment? It was proposed that the design should consist of selecting 10 watersheds randomly and 5 samples in each watershed (one site would be at the mouth of the watershed).
- Changing the design at this point could possible nullify the previous results, because it consists of changing the structure.

Wrap-UP/Next Step

- Sam Ziegler to send email to get feedback on meeting and solicit potential collaboration prrijects/participant needs and potential topics for the next TMC meeting. Next meeting Sept/Oct 2005
- Agenda Items Suggestions
    - Ocean Protection Council
    - Water Quality Assessment Report as per CWA Section 305(b)

California Nonpoint Source Program
Discussion Paper: Tracking Marina NPS Management Measures
By Lisa Sniderman, CCC (October 18, 2005)

The California NPS Plan includes 16 management measures (MMs) for reducing nonpoint source pollution (NPS) from marinas and recreational boating activities.

4.0	**MANAGEMENT MEASURES FOR MARINAS & RECREATIONAL BOATING**
4.1	**Assessment, Siting and Design**
A	Water Quality Assessment
B	Marina Flushing
C	Habitat Assessment
D	Shoreline Stabilization
E	Storm Water Runoff
F	Fuel Station Design
G	Sewage Facilities
H	Waste Management Facilities
4.2	**Operation and Maintenance**
A	Solid Waste Control
B	Fish Waste Control
C	Liquid Material Control
D	Petroleum Control
E	Boat Cleaning and Maintenance
F	Maintenance of Sewage Facilities
G	Boat Operation
4.3	**Education/Outreach**
A	Public Education/Outreach

The NPS Program is initially (prioritizing) tracking marina MMs related to:

1. water quality assessment (4.1A)
2. sewage facilities (4.1G)
3. waste management facilities (4.1H)
4. public education and outreach (4.3A)

These management measures reflect "areas" that have also been the focus of the Marina Interagency Coordinating Committee (IACC) working group over the past years. For example, a marina mapping subcommittee was formed to develop a GIS database and data, including the number of marinas, location and environmental facilities at marinas such as sewage pumpouts, among other available data, but it was unable to produce a statewide map of marinas. This information is similar to information that the NPS Program could use to help determine the extent of management implementation in California.

To track the extent of management measures implementation, the NPS Program, has proposed the following four indicators (see attached table):

(1) Number and location of 303(d)-listed waterbodies that include marinas as a source; number and locations of marinas that have been "assessed" for water quality baseline data, have monitoring programs;

(2) Number, location of marinas, sewage pumpout facilities; mobile services in the state and geographic areas supplied, number of boaters serviced at marinas;

(3) Number, location of used oil collection facilities/waste management facilities related to marinas, number, location of absorbent pad distribution, absorbent pad collection centers; and

(4) Number and locations of regional clean marina/clean boating programs in the state; number of marinas participating in programs

A series of maps were developed to present data related to these indicators and to help illustrate the status of implementation of these NPS MMs at marinas in California. These maps show:

(a) the distribution of marinas in the state and the number of boaters serviced;

(b) 303(d)-listed waters for which marinas have specifically been identified as a source, as well as those that are listed for pollutants likely to be caused by marina-related activities;

(c) the extent of NPS management practices (i.e., environmental facilities) implemented at marinas (sewage pumpouts, used oil collection facilities/waste management facilities related to marinas, absorbent pad distribution, absorbent pad collection centers, and the geographic areas where mobile services are supplied, among others);

(d) the number and locations of existing regional clean marina/clean boating programs in the state, along with the number of marinas participating in the programs; and

(e) the extent of water quality monitoring programs in, and around, existing marinas based on: (1) monitoring data collected to meet NPDES permit requirements, (2) monitoring data from STORET collected by USGS and other agencies at or near marinas, (3) monitoring data compiled by the Regional Water Quality Control Boards as part of existing programs, (4) monitoring data collected by trade associations or environmental groups, (5) monitoring data collected by regional monitoring programs, and (6) other sources.

Management Measure Category: Marinas

October 18, 2005

NPS Program Goal: Implementation of All Management Measures by 2013.
Desired Outcome: No waters are impaired due to NPS discharges/water quality objectives are achieved & beneficial uses maintained
Performance Measure: Extent of implementation of management measures.

Management Measure	Indicator (or Variable)	Data Source
4.1A. Water Quality Assessment Part (1):Assess water quality as a part of the siting and design of new and expanding marinas to establish baseline water quality conditions or trends. Part (2): Assess water quality at existing marinas to establish baseline water quality conditions.	• Number and location of 303(d)-listed waterbodies that include marinas as a source; • Number and locations of marinas that have been "assessed" for water quality baseline data, have monitoring programs	• SWRCB 2002 303(d) list; • 2002 305(b) Report (SWRCB); • survey data from marinas (to be conducted); • water quality data from Regional Boards, Marina IACC subcommittee; • SF Bay Marina Water Quality Project lit review, marina matrix (BCDC 2004); • Richardson Bay Regional Agency Harbor monitoring reports; • monthly monitoring reports-Shasta Lake Region 5-R; • San Diego Regional Harbor Monitoring Program
4.1G. Sewage Facilities Install pumpout, dump station, and restroom facilities where needed at new and expanding and existing marinas to reduce the release of sewage to surface waters. Design these facilities to allow ease of access and post signage to promote use by the boating public.	• Number, location of marinas, sewage pumpout facilities; • Mobile services in the state and geographic areas supplied, number of boaters serviced at marinas	• CCC: GIS marinas database, mobile services list; • draft Needs Assessment Report; • Department of Boating & Waterways: info. on number of pumpouts installed per CVA grant funding; • SWRCB General Order WQO #2004-0017-DWQ (RWQCB 8)

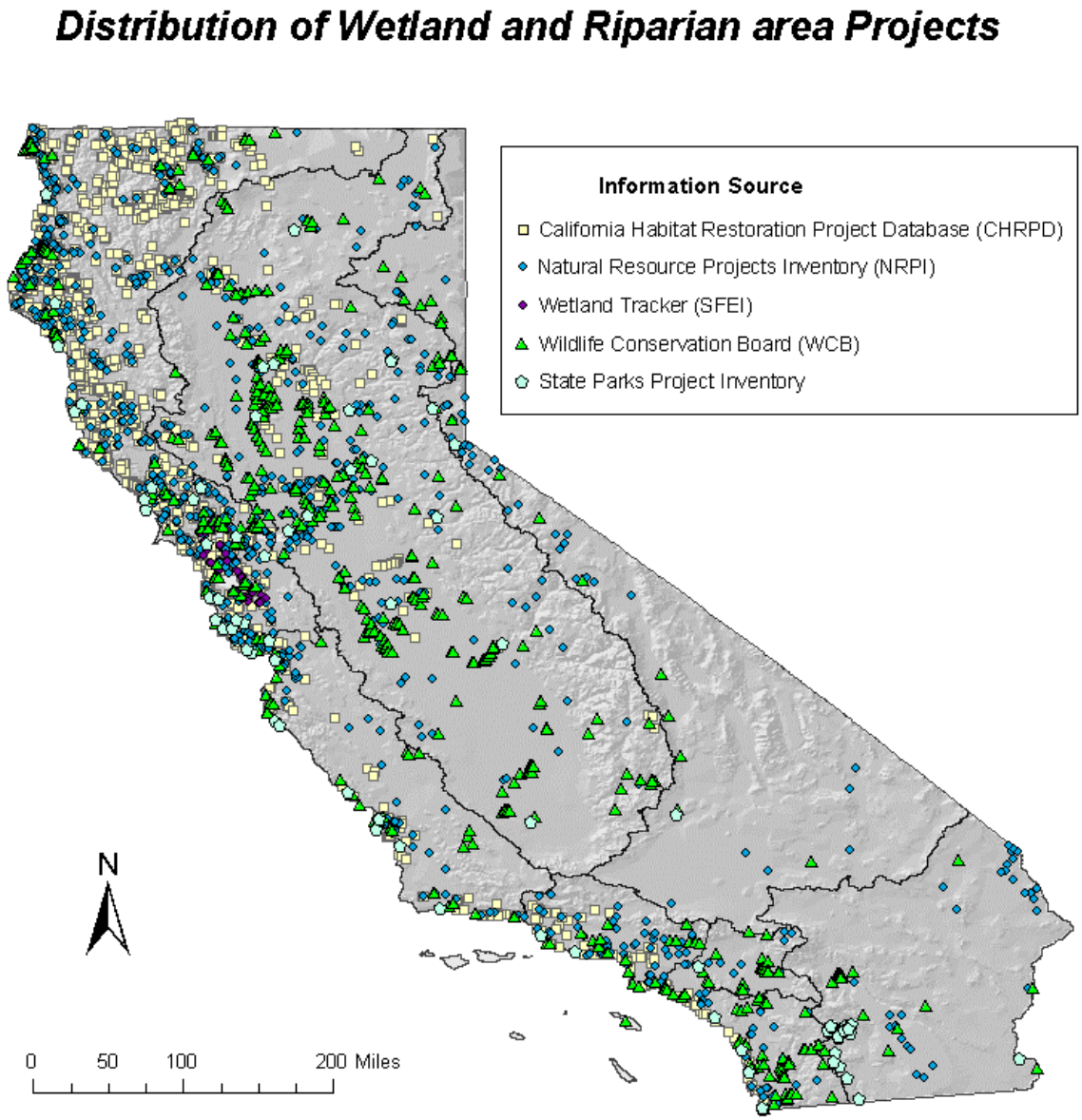
Management Measure	Indicator (or Variable)	Data Source
4.1H. Waste Management Facilities Install facilities where needed for the proper recycling or disposal of solid wastes (such as oil filters, lead acid batteries, used absorbent pads, spent zinc anodes, and fish waste as applicable) and liquid materials (such as fuel, oil, solvents, antifreeze, and paints) generated by users of marinas and boat maintenance areas. Design these facilities to allow ease of access, post signage to promote use by the boating public, and encourage recycling to the fullest extent possible.	• Number, location of marinas, used oil collection facilities/waste management facilities related to marinas, number, location of absorbant pad distribution, absorbent pad collection centers; • Mobile services in the state and geographic areas supplied, number of boaters at marinas serviced	• CIWMB grants database used oil recycling (certification centers) program website: http://www.ciwmb.ca.gov/UsedOil/CrtCntrs.asp; • CCC: GIS marinas database, mobile services list; • draft Needs Assessment Report (in progress-companion report to marina mapping project)
4.3A. Public Education and Outreach Implement educational programs to provide greater understanding of watersheds, and to raise awareness and increase the use of applicable marina and boating management measures and practices where needed to control and prevent adverse impacts to ground and surface water. Public education, outreach, and training programs should involve applicable user groups and the community (e.g., boaters, boating groups, marina owners and operators, boat maintenance facility operators, waterfront agencies, service providers, live-aboards, environmental community and other related groups)	• Number and locations of regional clean marina/clean boating programs in the state; • Number of marinas participating in programs	• California Clean Boating Network (statewide by regional chapters)/Boating Clean and Green-CA Coastal Commission, • Marina IACC subcommittee • NPS Encyclopedia • San Diego Clean Marina Program

Wetland & Riparian Restoration
Tracking of Management Measure 5.1B, 6A, 6B &6C

The NPS Program is tasked with tracking the States efforts to implement the 61 Management Measures, four of which pertain to wetland protection and restoration. To meet this responsibility, the Program initiated an inventory of wetland projects, including acquisition and restoration of wetlands and riparian corridors (Management Measure 5.1B, 6A, 6B &6C) which have been funded by California state grant programs (e.g. 319(h) and Prop 13 & 40Bond Act). No compensatory mitigation projects were included in this inventory.

Data request were made to many of California's State agencies which administer grants or implement grant funded projects. We received data from 5 sources (NRPI, CHRPD, WCB, SF Bay Wetland Tracker, and State Parks project database). Contact with other database managers was initiated but this inventory project required a short response time that several agencies could not accommodate. The report included almost 2500 wetland projects between 1993 and 2004, categorized as Restoration, Acquisition, Monitoring and Assessment, and Education and Outreach. All wetland project in California with valid coordinates were mapped (see Map 1), and reported by funding level and acreage. Trends in state funding and acreage restored were also quantified, as was appropriate using the available data.

Unfortunately, the report at present is unable to report an accurate estimate of total acres restored and protected within California. Compilation of the five available datasets was problematic and missing dataset made the estimate incomplete. Each dataset recorded different information using different terminology. Efforts to eliminate duplicate records (records of same project in various databases) was extremely labor intensive and problematic, as there were no consistent project identifier. Therefore, elaborate procedures to query by date, geographic location, project name and project intent were required to identify duplicates. It is believed that duplicate records still persist and therefore all acreage and funding calculations are reported individually for each dataset. Inaccurate reporting of wetland acreage made efforts to quantify net increase in wetland area difficult. And Finally, it was difficult to report on types of actions completed, as most project included some restoration, monitoring and planning, and only primary activities could be associated with funds allocated. The report does provide important information regarding geographic distribution of restoration efforts and possible improvements to future reporting of wetland projects.



Map 1.0 Wetland and riparian area restoration projects (1993-2004) with valid coordinate data in tracking databases.

California Nonpoint Source Program
Discussion Paper: Tracking Urban Management Measures
By Lisa Sniderman, CCC (October 18, 2005)

Of California's 15 Urban NPS Management Measures (see below), the Nonpoint Source Program is considering tracking portions of three of them (MM 3.1 (3.1A&B), MM 3.2 (3.2A), MM 3.4 (3.4A&B)) using key indicators (see attached table and below). Our intent is to begin to identify the extent of implementation of these urban NPS MMs, understanding that this may "pave" the way for future tracking efforts and for assembling a more complete picture of the effects of urbanization on water quality. An example of an indicator we are proposing is reviewing select Local Coastal Programs or General Plans for consistency with the Urban MMs. Perhaps a more meaningful indicator of what is happening on the ground, and certainly a more complex indicator that we would like to discuss is tracking the change in impervious cover over time. Further, we are considering indicators to track MMs for Onsite Wastewater Treatment Systems, which could perhaps relate to and utilize information collected from the State Board's multi-year effort to establish standards for OWTSs.

3.0 MANAGEMENT MEASURES FOR URBAN	
3.1	**Runoff From Developing Areas**
A	Watershed Protection
B	Site Development
C	New Development
3.2	**Runoff From Construction Sites**
A	Erosion and Sediment Control
B	Construction Site Chemical Control
3.3	**Runoff from Existing Development**
A	Existing Development
3.4	**Onsite Wastewater Treatment Systems (OWTSs)**
A	New OWTSs
B	Operating OWTSs
3.5	**Transportation Development**
A	Planning, Siting and Developing Roads and Highways
B	Bridges
C	Construction Projects
D	Chemical Control
E	Operation and Maintenance
F	Road, Highway and Bridge Runoff Systems
3.6	**Education/Outreach**
A	Pollution Prevention Education

To track portions of MM 3.1 (3.1A&B), MM 3.2 (3.2A), MM 3.4 (3.4A&B), the NPS Program is considering using the following indicators (see attached table):

(a) Number and distribution of Local Coastal Program (LCP) Land Use Plans; water quality and other ordinances (implementation plans) that contain water quality policies (implementation plans) consistent with urban MMs 3.1A, 3.1B, 3.2A (selection for first cut limited to those Commission-approved LCPs/LCP

amendments for cities and counties with major revisions to water quality elements between 2000-2005);

(b) Number of city and county General Plans that have been updated after 2000, and include water quality elements consistent with Urban MMs 3.1A, 3.1B, 3.2A;

(c) Number and distribution of watershed plans or assessments in California;

(d) Number and location of impervious surface assessments conducted in California (scale, time, location, detail TBD);

(e) Percent of impervious surface change/cover in select watersheds in California (scale, time, location, detail TBD);

(f) Number and locations of 303(d)-listed waterbodies that are impaired for OWTS-related pollutants, and plans, assessments that have been developed or conducted in those waterbodies that include OWTS

We would like to discuss the use of these indicators, identify alternative indicators as appropriate, and identify potential data sources.

Management Measure Category: Urban

October 18, 2005

NPS Program Goal: Implementation of All Management Measures by 2013.
Desired Outcome: No waters are impaired due to NPS discharges/water quality objectives are achieved & beneficial uses maintained
Performance Measure: Extent of implementation of management measures.

Management Measure	Indicator (or Variable)	Data Source
3.1.A Watershed Protection Develop a watershed protection program to: 1. Avoid conversion, to the extent practicable, of areas that are particularly susceptible to erosion and sediment loss; 2. Preserve areas that provide important water quality benefits and/or are necessary to maintain riparian and aquatic biota; 3. Protect to the extent practicable the natural integrity of water bodies and natural drainage systems associated with site development-including roads, highways, and bridges; 4. Limit increases of percent impervious surfaces; and 5. Provide education and outreach to address sources or nonpoint pollution	• Number/distribution of Local Coastal Programs (land use & implementation plans) that contain consistent water quality policies; • Number of city/county General Plans that have been updated after 2000, and include consistent water quality elements; • Number/location of impervious surface assessments; • % change in impervious surface for select watersheds; • Number/location of watershed plans/assessments;	• CA Coastal Commission; • CA Land Use Planning info. Network: http://ceres.ca.gov/planning/; • local government websites; • various land use info; • CA Legacy Project, • other
3.1 B: Site Development Plan, design, and develop sites to: 1. Protect areas that provide important water quality benefits, necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss; 2. Limit increases of impervious areas; 3. Limit land disturbance activities such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss; and 4. Limit disturbance of natural drainage features and vegetation.	• Same as 3.1.A	• Same as 3.1.A

Management Measure	Indicator (or Variable)	Data Source
3.2 A: Construction Site Erosion and Sediment Control 1. Reduce erosion and, to the extent practicable, retain sediment on site during and after construction; and 2. Prepare and implement, prior to land disturbance, an effective, approved erosion and sediment control plan or similar administrative document that specifies erosion and sediment control provisions.	• Number/distribution of Local Coastal Program (land use & implementation plans) that contain consistent water quality policies; • Number of city/county General Plans that have been updated after 2000, and include consistent water quality elements;	• CA Coastal Commission; • CA Land Use Planning info. Network: http://ceres.ca.gov/planning/; • local government websites; • various land use info
3.4 A New Onsite Wastewater Treatment Systems (OWTS) 1. Ensure that new OWTSs are located, designed, installed, operated, inspected, and maintained to prevent the discharge of pollutants to the surface of the ground and to the extent practicable reduce the discharge of pollutants into ground water. Where necessary to meet these objectives: Discourage the installation of garbage disposals to reduce hydraulic and nutrient loadings;Install low-volume plumbing fixtures in new developments or redevelopments as required by State law; and Encourage installation of low-volume plumbing fixtures in existing developments. Implement OWTS inspection schedules for pre-construction, construction, and post-construction.	• Number and locations of 303(d)-listed waterbodies that are impaired for OWTS-related pollutants, and plans, assessments that have been developed or conducted in those waterbodies that include OWTS	• On-Site Wastewater Treatment and System Repair of Failure/Malfunction Survey (Jan 2003); • Survey of Septage Treatment, Handling and Disposal Practices in California (Dec 2002); • Review of Technologies for the Onsite Treatment of Wastewater in California; • 2003 report, "Status Report: Onsite Wastewater Treatment Systems in California." • 2002, 2005 303(d) lists; TMDL plans for OWTS-related pollutants

Management Measure	Indicator (or Variable)	Data Source
3.4 A New Onsite Wastewater Treatment Systems (OWTS) ***continued*** 2. Direct placement of OWTS away from unsuitable areas. Where OWTS placement away from unsuitable areas is not practicable, ensure that the OWTS is designed or sited at a density so as not to adversely affect surface waters or ground water. Unsuitable sites include, but are not limited to, areas with poorly or excessively drained soils; with shallow water tables or high seasonal water tables; within floodplains; or where nutrient and/or pathogen concentrations in the effluent cannot be sufficiently treated or reduced before the effluent reaches sensitive water bodies. 3. Establish protective setbacks from surface waters, wetlands, and floodplains for conventional as well as alternative OWTS. The lateral setbacks should be based on soil type, slope, hydrologic factors, and type of OWTS. Where uniform protective setbacks can not be achieved, site development with OWTS so as not to adversely affect water bodies and/or contribute to a public health nuisance. 4. Establish protective separation distances between OWTS system components and groundwater. The separation distances should be based on soil type, distance to ground water, hydrologic factors, and type of OWTS. 5. Where conditions indicate that nitrogen-limited surface waters may be adversely affected by excess nitrogen loadings from ground water, prohibit the installation of OWTSs or require the installation of OWTS that reduce total nitrogen loadings to meet water quality objectives.		

Management Measure	Indicator (or Variable)	Data Source
3.4 B: Operating OWTS 1. Establish and implement policies and systems to ensure that existing OWTSs are operated and maintained to prevent the discharge of pollutants to the surface of the ground and, to the extent practicable, reduce the discharge of pollutants into ground water. Where necessary to meet these objectives, encourage the reduced use of garbage disposals, encourage the use of low-volume plumbing fixtures, and reduce total phosphorus loadings to the OWTS by 15 % (if the use of low-level phosphate detergents has not been required or widely adopted by OWTS users). Establish and implement policies that require an OWTS to be repaired, replaced, or modified where the OWTS fails or threatens or impairs surface waters. 2. Inspect OWTSs at a frequency adequate to ascertain whether the OWTSs are failing. 3. Consider replacing or upgrading OWTS to treat influent so that total nitrogen loadings in the effluent are reduced to meet water quality objectives. This provision applies only where: a. Conditions indicate that nitrogen-limited surface waters may be adversely affected by significant ground water nitrogen loadings from an OWTS, and b. Nitrogen loadings from OWTS are delivered to ground water.	• Same as 3.4 A	• Same as 3.4 A

California NPS Tracking and Monitoring Council (TMC)

Request for Ideas
October 2005

*** * * Enhancing Regional Monitoring * * ***

The TMC is being asked to participate in a brainstorming and discussion on the topic of enhancing regional monitoring. The California NPS Program has $425,000 allocated to supporting activities aimed at enhancing regional monitoring. This discussion is a first step. The result of the discussion will guide the NPS Program as it moves forward in selecting 3-5 projects to enhance regional monitoring. Please bring you ideas to the TMC Meeting (October 25, 2005) or send an email to Melenee Emanuel at memanuel@waterboards.ca.gov

Background

The Surface Water Ambient Monitoring Program (SWAMP) strategy relies on regional monitoring activities associated with each of the Regional Water Quality Control Boards (RWQCBs). Within some regions there are more robust regional monitoring efforts that compliment and enhance RWQCB activities (e.g., S.F. Bay Regional Monitoring Program, the Interagency Ecological Program, etc.). The CA NPS Program would aim to enhance regional monitoring efforts within the state framework for a few watersheds working on various scales (e.g., Central Valley, Klamath Basin and South Coast.) Activities may include identifying monitoring objectives and indicators, conducting assessments based on current data or facilitating data coordination and integration. All regional efforts would have to be compatible with the statewide SWAMP strategy.

Desired Outcomes

- Help addressing the NPS monitoring objectives
- Regional monitoring that compliments and enhances RWQCB/SWAMP activities
- Coordinated, integrated monitoring that is ongoing and sustainable
- Linkage between local, regional and statewide monitoring
- Enhanced California Water Quality Assessment Report (CWA Section 305(b))
- Accelerated NPS implementation
- Restoration of impaired waterbodies (TMDL implementation) and protection of high quality waters

Project Timeframes

Begin: Fall 2006/End: Fall 2009